

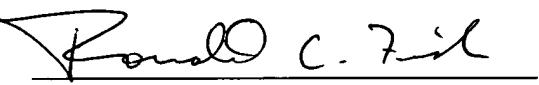
PATENT

ABSTRACT

A cable modem termination system is disclosed with flexible mapping of upstreams to downstreams and flexible mapping of downstreams to optical nodes and optical nodes to upstream receivers and the ability to add single upstreams or downstreams as needed for 5 load balancing. Multiple downstreams can share the same upstream. Multiple receivers can be coupled to the same upstream. Monitoring of upstream performance for overperforming or underperforming modems can be carried out, and new upstreams with higher and/or lower throughput can be created to service the overperformers and/or underperformers. Modems can be grouped into logical groups with different performance levels and serviced 10 by different upstreams or different upstream logical channels on the same upstream physical channel.

15 I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail in an envelope addressed: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 29, 2003.
(Date of deposit)

20 Express Mail Receipt Number: EV 104612010 US


Ronald C. Fish

25 Ronald Craig Fish, President
Ronald Craig Fish a Law Corporation
Reg. No. 28,843